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ABSTRACT

This high school environmental guide uses the Students Toward Environmental Participation (S.T.E.P.) approach. Activities are designed to develop an awareness of the purpose, interrelationship, and wholeness of the earth through activities, games and role-playing. Sample activities include: trust walk, scavenger hunt, nature collage, and alphabet animals. As a guideline for teaching the concepts of the guide, lessons use the structure provided by the S.P.I.C.E. (Similarities and Varieties, Patterns, Interaction and Interdependence, Continuity and Change, and Evolution and Adaption) strands. (Author/RH)

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S.T.E.P.

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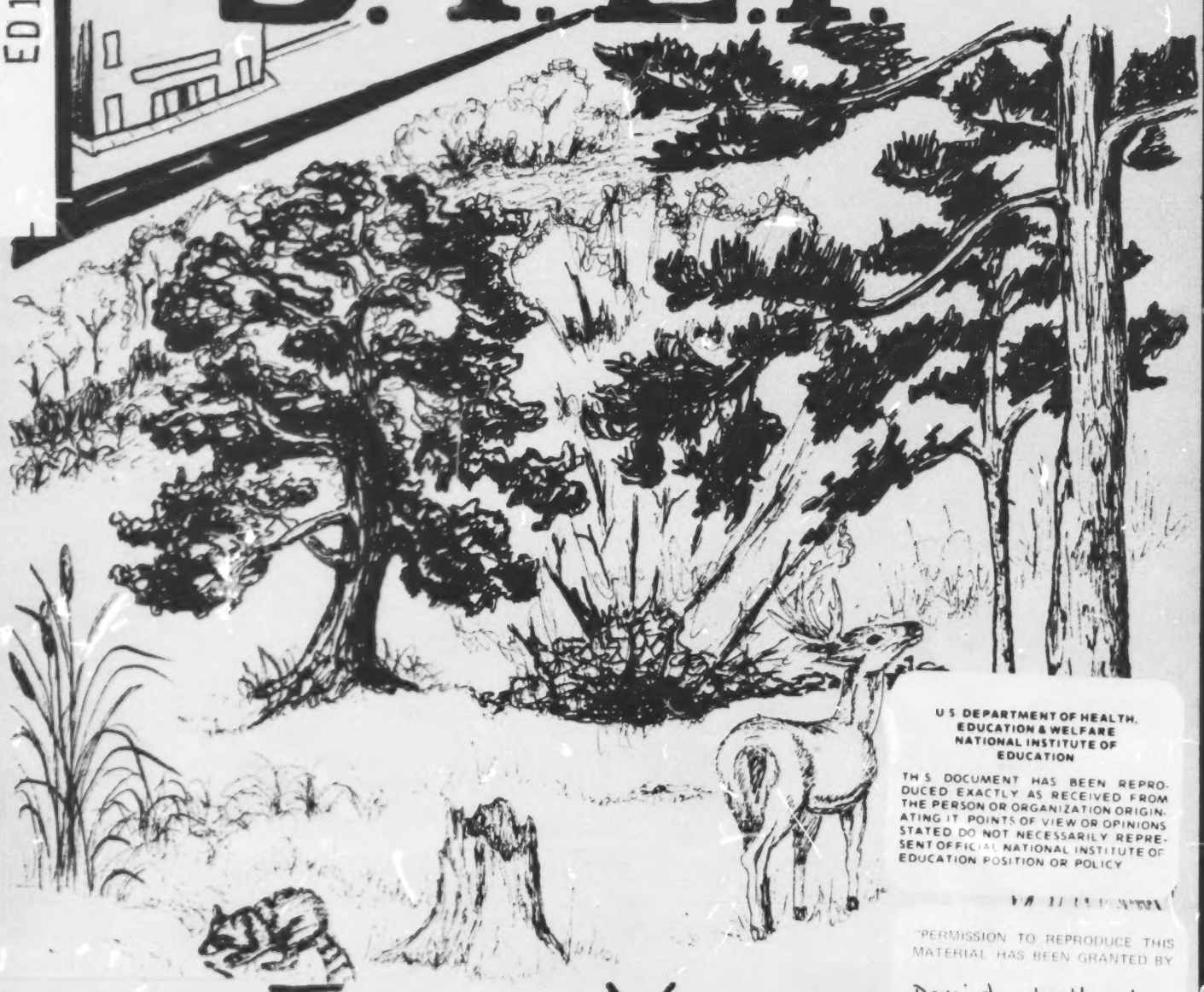

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INTO YOUR ENVIRONMENT

SE 024 759

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Funded Through A Mini-Grant From The Department of Education
Office Of Environmental Education
Tallahassee, Florida

S.T.E.P. Leaders

Sponsors: Mrs. Margaret Privette & Mrs. Marianne McDonald

The students of S.T.E.P. would like to express our love and appreciation to Mrs. Privatte and Mrs. McDonald for all their help, concern, and patience. They were always there when we needed them.

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I. Introduction

S.T.E.P.

Students Toward Environmental Participation

What is S.T.E.P.?

S.T.E.P. stands for Students Toward Environmental Participation. S.T.E.P. members are high school students who:

1. are environmentally aware of the wholeness of the earth, who understand the inter-dependence of all living things, and who can relate to nature in a personal manner;

2. are personally committed to the redemption of the environment-both human and natural;

3. prove their own commitment by communicating environmental awareness to younger children in Environmental Study areas as a group or on a one-to-one personal basis. S.T.E.P. members also communicate these same environmental values and concerns to their peers and elders by many other methods using a variety of techniques.

Structure and Philosophy

Each S.T.E.P. unit is regarded as a local high school group dedicated to teaching the philosophy of the S.T.E.P. program. High school students are ideal for these activities because they can communicate awareness activities to younger children and to adults. S.T.E.P. is a positive approach to conservation of our environment. Individuals are made aware of the purpose, interrelationship and wholeness of the earth through activities, games, and role-playing. When an individual has become aware of the role of each plant, animal or thing in nature, he will make a value judgement relative to conservation or destruction of the environment. Hopefully through programs such as S.T.E.P. we will all learn to think: "Conservation and Preservation."

II. Environmental Study Area

Learning with the Strands

The strands are five avenues used to teach environmental education. They act as a handle which enables us to see our place in nature and to understand the basic interrelationships in any environment. The object is not to teach the strands per se, but that they exist is all life's situations. These five strands promote the use of the senses--seeing, touching, smelling, and hearing.

S.P.I.C.E.

S. - Similarities and Varieties - Many likenesses and differences occur among living and non-living things. Finding the similarities can help you classify things into patterns to increase your understanding of the world.

P. - Patterns - In nature and in everyday living we see arrangements that are organizational, that play a special function or just are pleasing to the eye.

I. - Interaction and Interdependence - Nothing can exist by itself. Everything is constantly interacting with living and non-living things. The process continues even after death (as part of the life pattern), for dead life-forms nourish the living.

C. - Continuity and Change - Both living and non-living things are constantly changing, but some things remain the same in spite of change.

E. - Evolution and Adaptation - Living and non-living things alter to "fit" into the environment or adapt. Centuries of time of adapting may result in a new species-evolution.

The strands provide an interesting structure to explore an Environmental Study Area (E.S.A.). This is the place where we can do our thing in terms of relating to the environment and nature using the senses. ESA's may be natural, cultural, or historical areas designated for this type of study or they can be a school playground, a garbage dump, or your own backyard. An ESA is a place to love, feel and interpret the world.

. . . It might show man's relationship to the environment whether it is positive or negative.

. . . ESA's should have an overall "sturdiness" so that continued use will not have a devastating effect on the environment.

. . . It might be at a location that makes the area convenient for regular use by area schools.

III. Techniques

Conducting S.T.E.P. Activities

Here are some teaching techniques you may find helpful.

Teaching techniques:

A. Participate in an activity you ask others to do.
B. Try not to get in a rut. Make changes often.
C. Try new ideas, realizing that all of them will not be as successful as you would like.
D. Share your successful techniques with others and vice versa.
E. Copy others if you want, but use your own ideas.
F. ADAPTABILITY AND FLEXIBILITY: The name of the game! Age groups, cultural backgrounds, degrees of sophistication--all lead to a person's present attitude about his environment. You will have to make adjustments to those with each group you lead.
G. Make sure your environmental enthusiasm is up for the day! Your frame of mind will rub off on your charges.
H. Try to do activities you know the most about but don't do the same ones all the time--change!
I. Patience is a necessary virtue.

Skills:

A. Discussion skills

1. Ask questions to stimulate thinking, not test-type ones.
2. Fit ecological concepts in when you can with ease, not because you think you have to.
3. Let your group teach you, and acknowledge this to your group.
4. Encourage curiosity. Let individuals find their own items of interest.
5. Encourage them to question.
6. Encourage creativity.

B. Control Techniques

1. Tell your group your rules before starting on the activity.
2. Quiet voice, quiet children. (Usually!)
3. Take off quickly for next "stop spot" with eager anticipation.
4. Encourage investigation as a group.

C. Evaluation

1. Ask for comments (good and bad) at the end of each workshop.
2. Solicit ideas for new S.T.E.P. activities.
3. Ask students to write evaluation after they get back to the classroom and return it.

IV. Activities

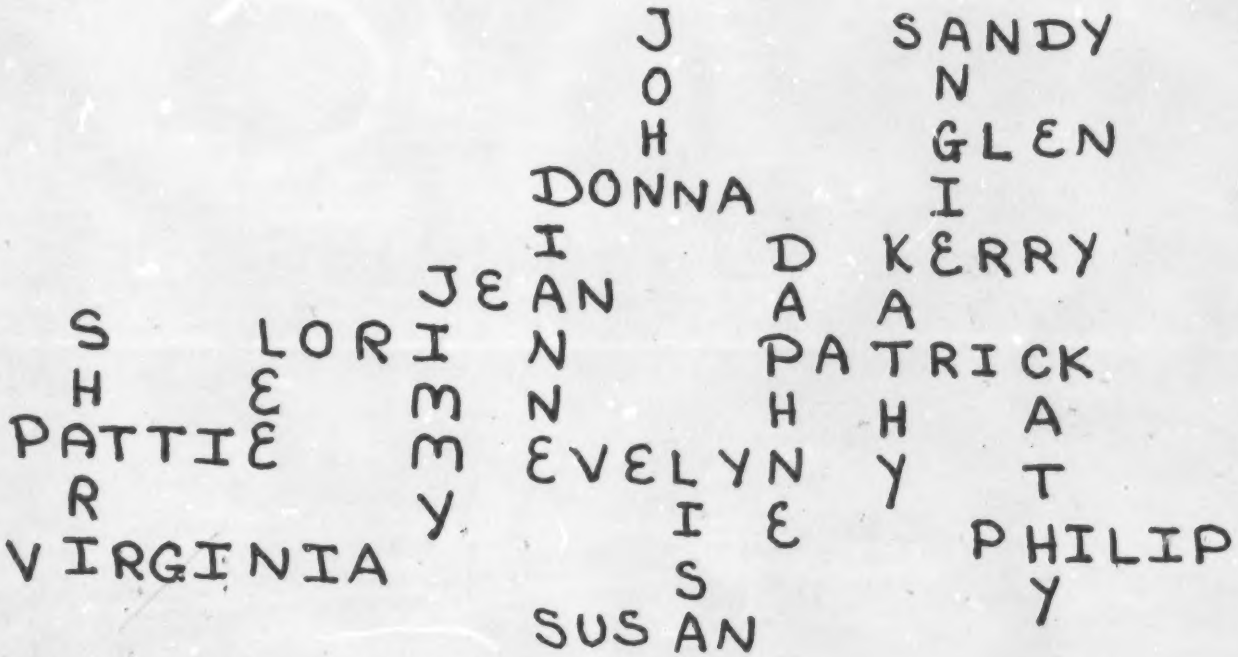
Name Game

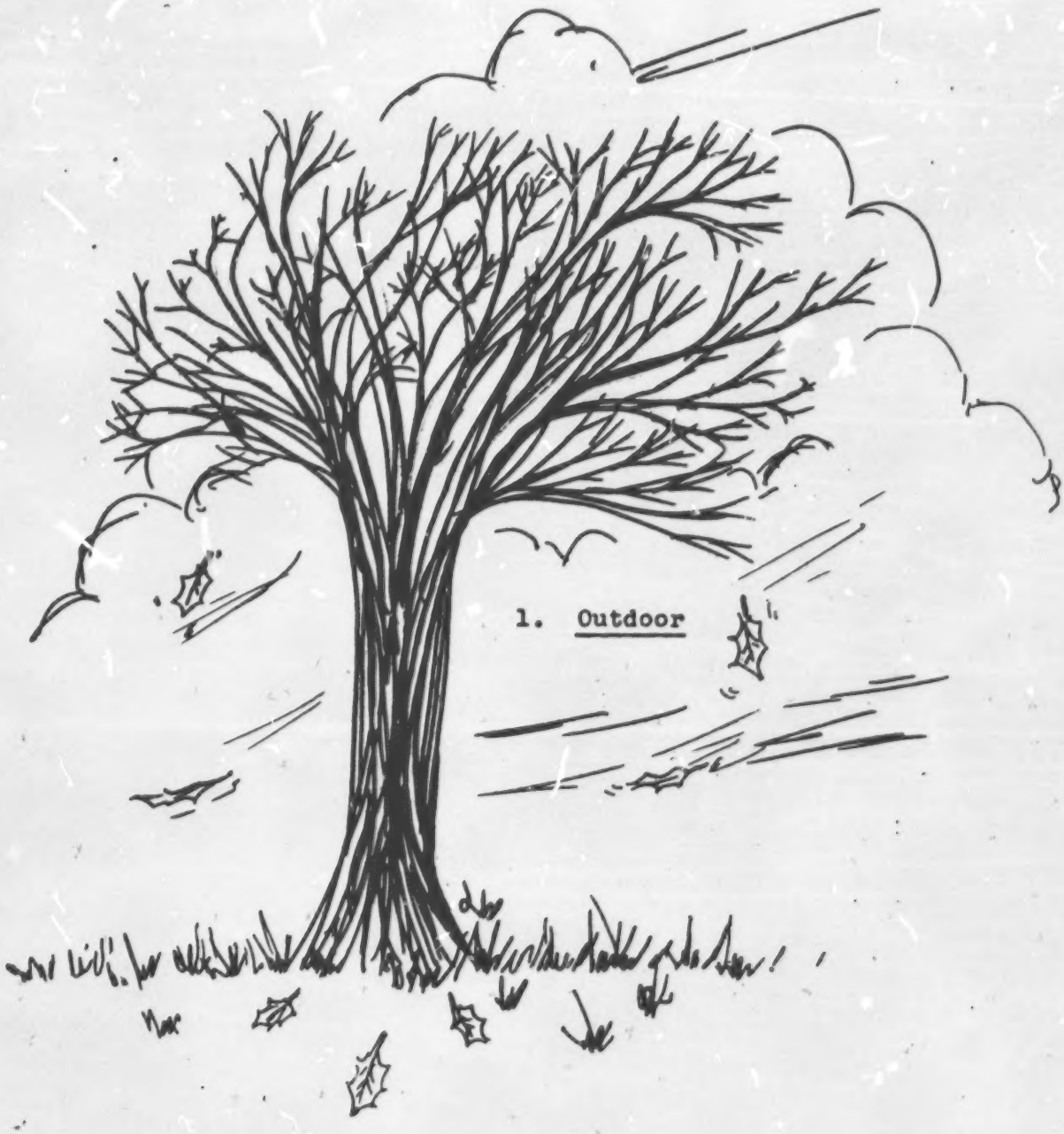
Purpose: Used as a method of introduction.

Materials: none

Procedure: This is to be done at the start of the day. Everyone sits in a circle. Start with one person. This person must say his/her name and their favorite thing to do. The next person must say their own name and favorite thing and they repeat the first person's. The last person should be able to name everyone and their favorite things to do.

Questions:
1. Now that you know everyone's name do you feel more comfortable?





1. Outdoor

Trust Walk

Purpose: To show the uniqueness of nature by using the sense of touch.

Materials: blindfold.

Procedure: Instruct each person in your group to get a partner. Do not talk to your partner during this exercise. One person is blindfolded and led around a designated area by his partner until his sense of direction is lost. (Make sure the boundaries are clear when working with young children.) The blindfolded person is then led to a tree and is instructed to feel the tree and the ground around it in order to be able to recognize its distinguishing features. Then proceed back to the meeting place. Remove the blindfold and tell them to find their tree. Unless the person has extreme difficulty in finding his tree, his partner should not give any hints as to the tree's location.

Once the person finds his tree, the roles are reversed and the process is repeated. When everyone has found his tree, get the group together and begin a discussion. Ask questions like:

1) How were you able to find your tree without having seen it?
2) Did you feel the ground around your tree?
3) How is each tree different even though a forest may have many of the same kinds of trees?
4) How are these differences important to us?
5) How are our trees being endangered?

TRUST WALK?

Scavenger Hunt

Purpose: To make students aware of the details in nature.

Materials: Index cards with scavenger list.

Procedure: Split your group into smaller groups of two or three people, depending on how large your group is. Give one person in each group a list, and send them out to find as many items on the list as they can. Ask them to bring the objects back to share and discuss with everyone else. You may want to ask questions such as:

1. What senses did you use to find these things?
2. Why do things in nature need to be different shapes?
3. If you were blind, what sense would you have had to use to locate some of these things?

Sample List:

Three primary colors (yellow, red, blue)

Something square

Something with an unpleasant smell

Something soft

A simple machine

Something rough

Something older than you

Something with a pleasant smell

Something with a sour taste

Something younger than you

Something with a sweet taste

Something round

The Web of Life

Purpose: To illustrate how plants and animals (including man) are dependent upon each other and upon the environment (sun, air, water and soil) for survival through a web of interrelationships, and what happens if the web is damaged.

Materials: ball of string, 4" x 12" name cards, and a magic marker or crayon.

Procedure: Players form a circle. Each player should be given a note card and a magic marker. On this card he will write something that he would like to be in the environment, such as the sun, air, water, soil, different types of plants and animals, and man. The leader begins by asking the "sun" to hold the end of a string. Them ask what is dependent on the sun, running the string to whatever the group decides is dependent on the sun. Next, what is dependent on that, etc. Continue until a web is formed from the string.which connects all the parts of the environment. The leader then asks the group what part of the environment they would like to drop. That person then drops his string and anyone who has a loose string proceeds to drop theirs. Eventually, all the strings have been dropped. Conclusion: if one species is dropped from the earth eventually all will die. Start a discussion on this topic.

Some lively discussion and penetrating questions often accompany this game of course, the leader must gauge the complexity of the game according to the group's age and abilities. This activity stimulates the thinking of any age group relative to interdependence.

Questions:
1. What would happen if one species was destroyed?
2. How would it effect you?
3. What effect does man have on the environment?
4. What can you do to help protect your environment?
5. Why is it necessary to protect your environment?

Creepy Crawler Race

Purpose: To make the students more aware of the different types of animal locomotion.

Materials: paper cups, (optional)

Procedure: Give each member of your group a paper cup and tell them to catch a small insect in it. When everyone has an insect, draw a circle in the sand and have the students place their insects in the middle of the circle. Ask the student to pay special attention to his insect as they race to get out of the circle. The first insect to cross outside the circle's boundaries wins the race.

Mark off a special area and have the members of your group race. Tell them to imitate the type of locomotion their insect used. Ask questions such as:

1) If you could be any insect, which would you be and why?
2) Are all insects the same color? If not, what are some reasons for their difference in color?
3) Where are some places insects can be found?
4) What purposes do insects serve?
5) What type of locomotion did your insect use?
6) Compare locomotion to protective coloration.

Paint a Picture

Purpose: To make the student more aware of the colors of nature by using their sight, creativity, and use of their environment.

Materials: 5" x 7" index cards.

Procedure: Use the natural colors obtained from nature to "paint" a picture on index cards. Bark, dirt, parts of plants, berries, etc. may be smeared onto the card to produce the picture. When all students have completed their pictures, ask them such questions as:

1) How could different environments affect the outcome of the picture?
2) What did you use to get the colors?
3) What other things could you have used?
4) What things produce the best colors? Why?

Sound Awareness

Purpose: To make the student more aware of the different sounds in nature.

Materials: none.

Procedure: Have everyone get in a circle and get comfortable. (lay down, stretch out or whatever) While they are relaxed ask them to close their eyes and listen to all the sounds. Tell them to try to imagine what is going on around them. Example: It could sound like a band. A cricket on the guitar, a bird as lead singer, a woodpecker on the drums, etc. When they are finished, ask them to open their eyes and remain silent. When all eyes are open, start a discussion.

Questions:
1. What did you hear?
2. Was it pleasant?
3. What did you imagine?

Sand Painting

Purpose: To make the student more aware of the various colors and textures of soil that occur naturally.

Materials: Baby food jars (with lids), labels or nametags.

Procedure: Locate an area with several colors of soil. Hand each student a jar labeled with his name. Pour about ½ inch of soil into the jar. Add another layer of a different color to the layer. Using a thin twig or pine needle, push the top into the bottom layer forming a design. Continue adding layers of varying thicknesses and color to the jar and finish the design. Pack each layer down firmly and be sure to fill the jar completely. DO NOT SHAKE THE JAR.

When all students have completed their sand paintings, assemble for a discussion. Allow them time to show their sand paintings to their classmates. During the discussion ask such questions as:

1) What is topsoil?
2) What is topsoil made of?
3) Where did you find your soil?
4) What makes the different colors?
5) Are all colors of soil the same texture?
6) Which color is the coarsest?
7) What would happen if the same crops were planted in the same place year after year? Why?
8) What is soil erosion? How can it be prevented?
9) Would life survive without soil? Why or why not?
10) How does man pollute the soil?

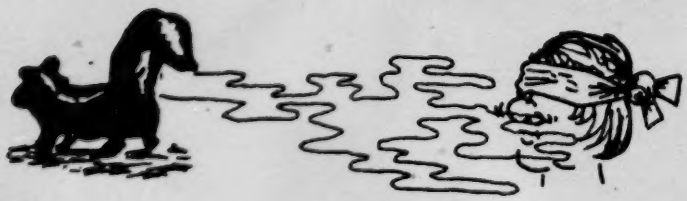
Scent Awareness

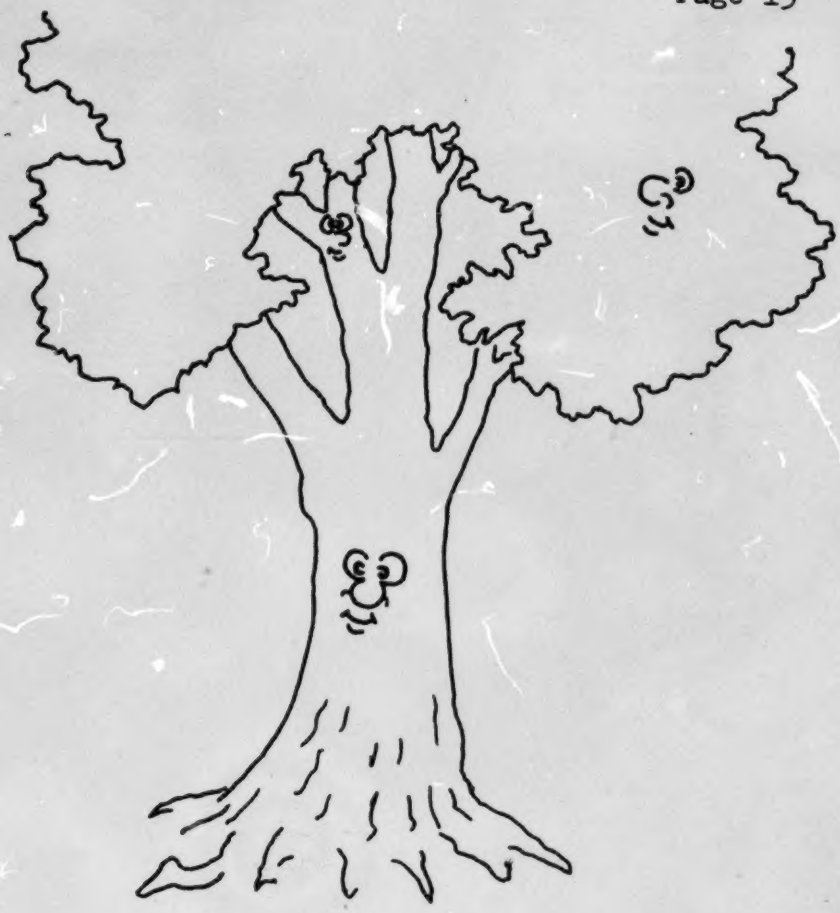
Purpose: To make students more aware of the everyday objects in nature that have identifiable scents.

Materials: Blindfolds, 3" x 5" index cards, pencils.

Procedure: Explain that people don't have as keen a sense of smell as do many other animals. Then have them find something with a pleasant smell and an unpleasant smell, and bring it back to the group. Ask them to smell their objects until they think they could recognize it. Take all the objects and blindfold the students. Have students sniff each object and tell you whether it is theirs or not. After everyone has sniffed each object, remove the blindfolds. Ask which scents were more easily identified. If time permits, have them put their blindfolds back on and sniff an item you had hidden. Then let them remove the blindfolds and draw a picture of what they believe the item was. When everyone has finished, show the object and see who was able to guess what it was. In discussing this activity, you should ask questions like:

1) How did you identify your object?
2) If you picked a wrong object, why did you think it was yours?
3) Which object had the strongest smell and why?
4) What causes some of the smells in nature?
5) What would be an advantage to odors in nature?
6) How do some animals use the sense of smell for defense?





Hidden Faces

Purpose: To increase creative ability.

Materials: None.

Procedure: Have the students find an object in a given area. This object should in some way remind them of an animal. The object should resemble the head or the entire body of the animal. After they have reassembled, have each student tell what animal their object represents and what makes it look like the animal. The animals can then be talked about.

Some questions that can be asked are:
1) What types of animals were easiest to find?
2) What type of material was used the most to represent the animal?
3) Do these objects relate in any way to the living animal?
4) Have the group decide who found the most unusual animal.

Rolling and Drifting

This is done with at least three people in a group. This activity will help them to realize the relationship between air and water, and everything that lives in either air or water.

Directions: Have the group sit in a relatively quiet place where either or both clouds and waves are visible. Ask questions about what they would pretend to be. For example:
1) If you were a cloud, what kinds of things would you see as you floated over the earth?
2) Does anyone know how clouds are formed?
3) Would you like to be a cloud? Why or why not?
4) Why do we need clouds?
5) What would happen if we had no clouds?

1) If you were a wave, what would you pass over as you made your way to the shore?
2) Did you catch some floating objects and carry them to shore? If so, what were they?
3) What kind of animals were living in your water and what did they eat?
4) Would you rather be a wave or a cloud?

Discuss throughly what would happen if all the water in the world dried up or became polluted and ways to avoid this situation.

Create an Animal

Purpose: To help the student become more aware of the different structures of animals.

Materials: yarn, string, wire, etc. (optional) Junior and Senior High School students are able to make the animals without string or anything to that nature. They can tie things together with pine needles, vines, etc.

Procedure: Have the students go out and make an animal from nature. This animal must not exist now or have in the past. It must be original. Example: a yellow-eared snoop, or a blue dotted thing-a-sling. While they are making these animals tell them to think about how this animal reproduces, where it lives, etc. When they return, ask these questions.

1. What is it?
2. Where does it live?
3. What does it eat?
4. What are its predators?
5. How does it reproduce? How often?
6. What is its life span?
7. Is it a rare animal? Why or why not?
8. How does it contribute to the environment?

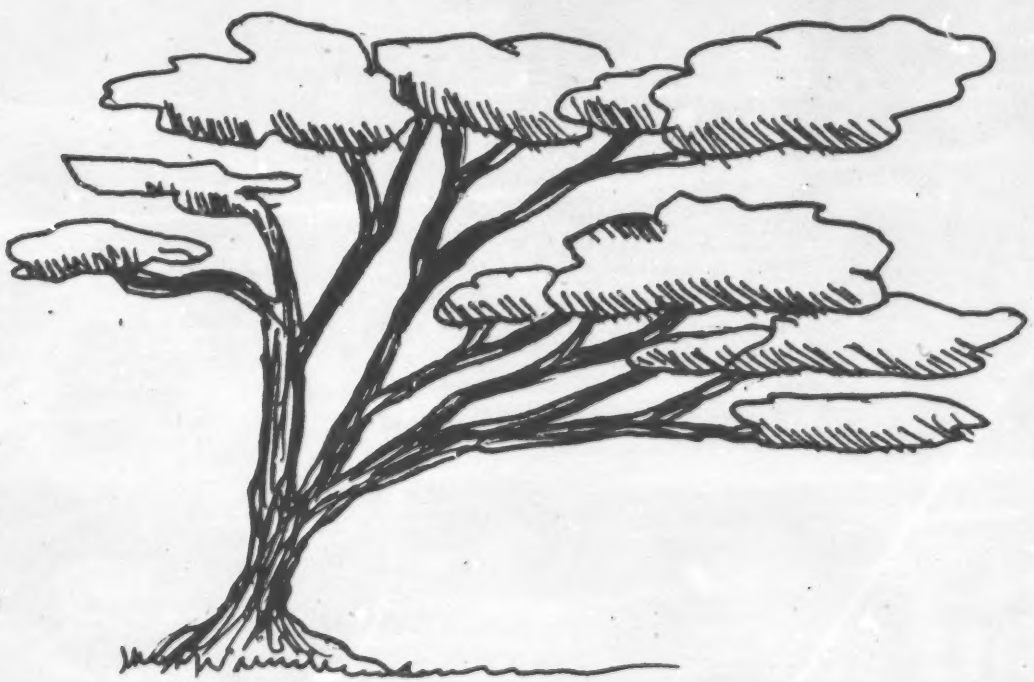
Sensory Wheel

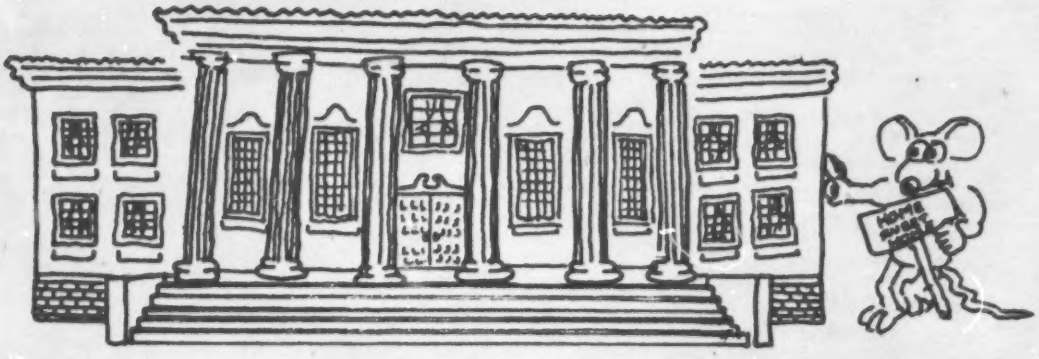
Purpose: To let the group become more aware of the different parts of a tree and the purpose of each part.

Materials: none.

Procedure: Pick a tree and have the members of your group sit close enough to it so that each person can rest his feet against the trunk while lying on his back. Ask everyone to lay back and concentrate on a certain part of the tree. Have them pretend they are part of the tree. After a few minutes of silence and while still laying down let one person tell which part of the tree he would like to be and why he picked that part. Ask each person what the part of the tree they chose. Continue around the circle until each person has told about their part of the tree. See if there was any part of the tree that no one wanted to be and why no one wanted that part.

Questions:
1. What part of the tree did you you select?
2. How did you feel?
3. Why did you pick that particular part of the tree?
4. What do you think your part of the tree does for the tree as a whole?
5. What are some uses of a tree?
6. How does the tree help us?





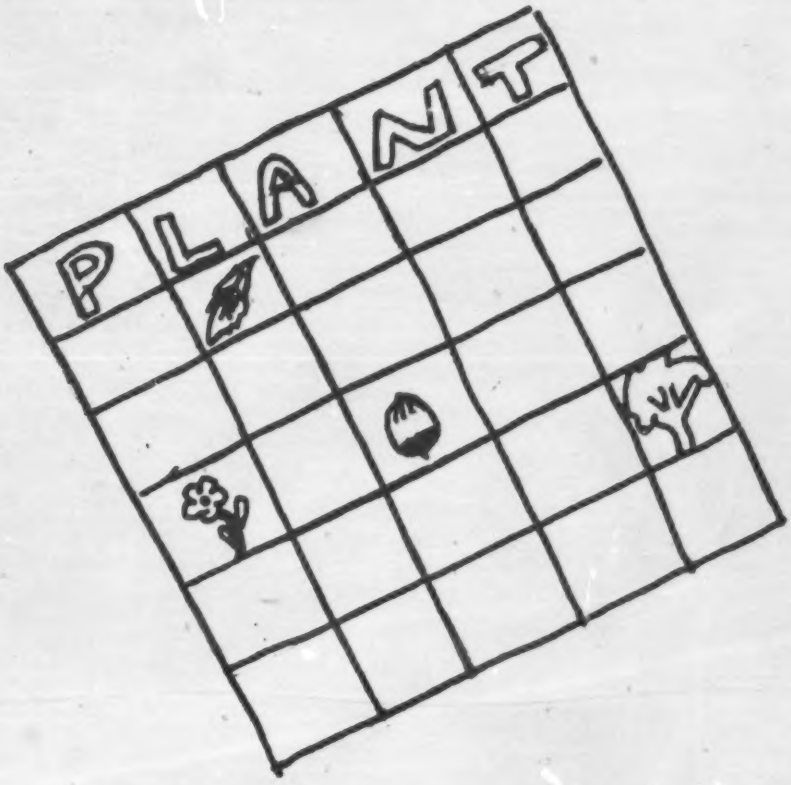
Build An Animal House

Purpose: To help students become aware of the various types of dwelling places that animals build in relation to their environment.

Materials: None

Procedure: Gather students together and explain the purpose of this activity. Instruct them to spread out over a designated area and gather various materials from nature (twigs, leaves, pine cones, etc.) and construct an imaginary animal home. This should be done individually. Once they have completed the home, ask them to describe an imaginary animal to live in it. When they have finished the home to their satisfaction, gather the group together and go to each home, asking the creator to explain it. Ask each student questions like:

1) What kind of an animal lives here?
2) Describe its appearance.
3) What does it eat?
4) What eats it?
5) How does it reproduce?
6) What does it use to build its home?
7) Where does it live in this particular area?
8) Where does it build its home?



Bingo Naturally

Purpose: To become more aware of the many varieties in Nature.

Materials: bingo cares made out of poster board (middle space X'ed out), note cards.

Procedure: Use words like PLANT, WOODS, TREES, etc. Place these words at the top of the bingo card. Group the students into teams of at least 2. Each team gets a bingo card. Lay the cards on the ground. The teams pick a row on their own cards that they would like to fill up. Example: If the card said "PLANT" at the top, they could fill in five spaces of "P". They must find 5 different things in nature that starts with "P". The first team to finish, wins.

Questions
1. Explain each item placed on the bingo cards. Tell how it is related to the word.

Alphabet Animals

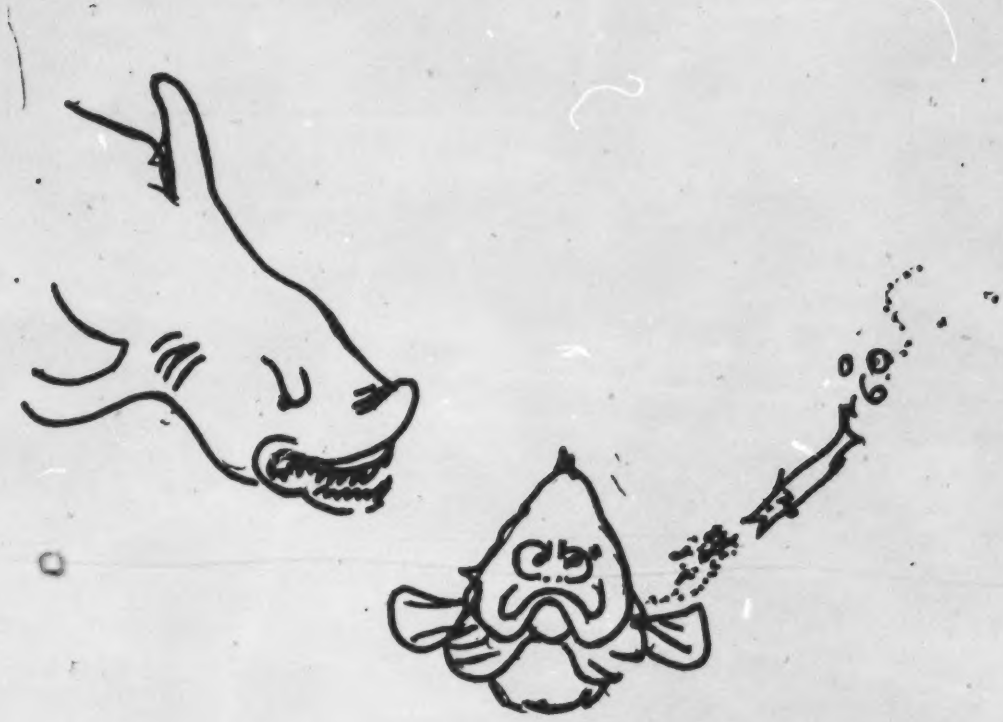
Purpose: To stimulate the imagination.

Materials: Paper, pencils or crayons, and one or two examples for instructor's use.

Procedure: Pass out paper and pencils or crayons to participants. Ask them to draw an animal using the letters in the animal's name. Show example(s) but don't forget to tell participants to draw something different!.

The letters do not have to be in order, and can be upside down. Eyes and ears can be added, but most of the animal should be made out of the letters.

Some questions are:
1) What made you pick that animal to draw?
2) Have group compare some pictures and tell how they are related and/or dependent.
3) Have them make up a name for a new kind of animal, and, using its letters, draw a picture of it. (a) What does this animal eat and where does it live? (b) Does it have friends or enemies?



Ocean I.D.

Purpose: To make students aware of things from the ocean and their place in the environment.

Materials: none

Procedure: Discuss food chains with your group and then ask them to get something that lives along the shore or in the water. When they return discuss the purposes of the things found. Ask questions such as:
1) What is a food cycle? How does it work?
2) What would happen if one animal were taken from the food chain?
3) How does pollution of the oceans affect the food chain?

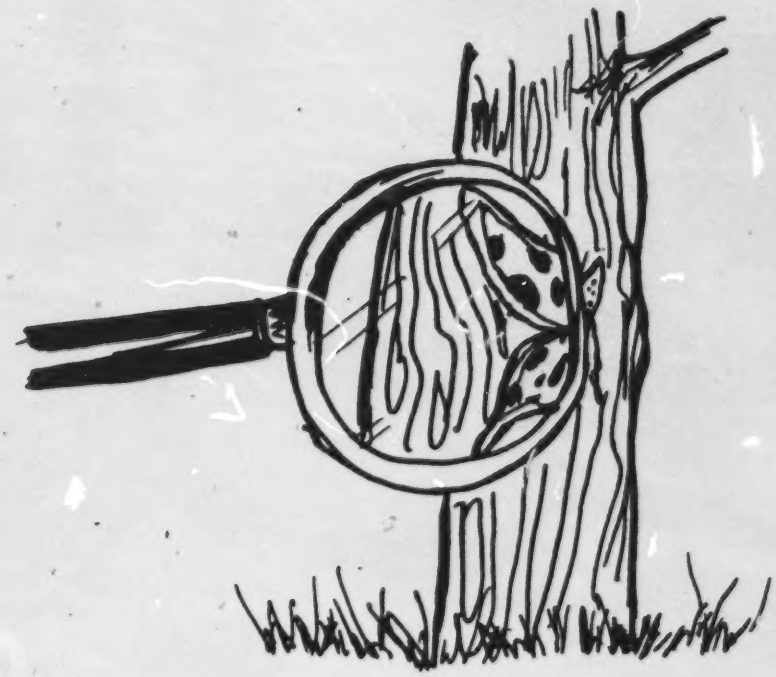
I Spy

Purpose: To show how animals use camouflage as a defense.

Materials: green toothpicks, piece of a pine cone, a stone, and some pine tree bark.

Procedure: Place the materials in different places so they are camouflaged. Then send the group out and tell them to tell you where each one is. If you desire you may use different materials.

Questions
1) Why were the objects hard to find?
2) How did you find them?
3) By what means did they camouflage themselves? (color, shape, etc.)
4) What animals can you think of that use camouflage as a defense?
5) What were the hardest to find and why?



Imagination

Purpose: To allow the student to use their imagination in relation to their environment.

Materials: none.

Procedure: Gather your group together in a circle. Ask them to close their eyes and imagine that they are a plant or an animal. Get them to imagine how this plant or animal feels (about himself, his environment, his world, etc.). Once this is done, have them play charades and act out their plant or animal. Let the others in the group guess what each actor is. When everyone is finished, get the group together and begin a discussion. Ask questions such as:

1) How do you feel as a plant or animal?
2) What are some good things in your environment?
3) What are some bad things?

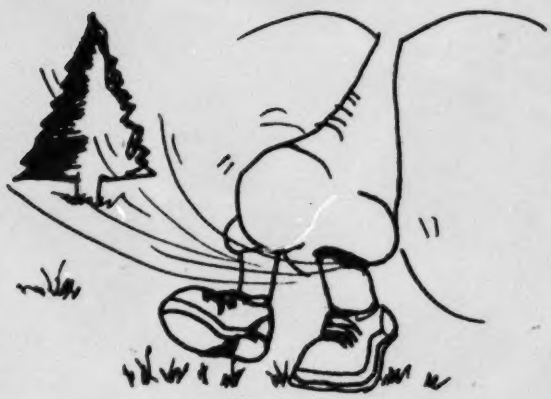
Nosey Walk

Purpose: To become more aware of the smells in nature.

Materials: none

Procedure: Take the students on a walk around the park or camp, where you are having the activities. See how many different smells that can be identified. Keep a list and add new smells as they are identified. Have each person pantomine his/her physical reaction to some special smell.

Questions:
1. What smell was the strongest? Why?
2. What smelled the best?
3. In what ways does the sense of smell contribute to the environment?
4. Are there any animals that use their sense of smell for protection? Name them.



Stake Your Claim

Purpose: To further your awareness of the surrounding environment.

Materials: pencils, 5 X 7 cards, string cut in 6 ft. pieces.

Procedure: Teams of 2 or 3 players. Each takes a piece of string about six feet long, ties the end together, stretches it out on the ground so as to cover as large an area as possible, and place stones or other objects on the string to hold it in place. The string outlines the "claim". One player acts as a secretary. The others, inside the claim, report to the secretary every single thing they can find in, on, or above their claim. If the name for something found isn't known, the player should make up a descriptive name for it. When the lists are complete, compare them.

Questions:
1. What team had the richest claim?
2. Was ther anything that everyone found? What?

Finger Identification

Purpose: To become more aware of nature through the sense of touch.

Materials: Nature's odds and ends--leaves, seeds, burrs, grasses, flowers, acorns, nuts, pinecones, twigs, pebbles, shells, and the like--things common to your area.

Procedure: Place all the materials in a box. Each person in turn is blindfolded. He/she goes through the contents of the box, making piles of all similar objects--all acorns together, all pebbles together, etc. He/she is timed, and the time is recorded. The one with the most accurate and fastest sense of touch wins.

Questions
1) What were the easiest things to group together?
2) Did you notice any distinct difference in texture? shape?

Good Neighbors

Purpose: To show interrelations and dependencies between two of nature's creations.

Materials: None

Procedure: At least four people are needed to perform this activity. Instruct the participants to go out into an area (premarked off) and find two things in nature that depend on each other. Then, bring these two things back to the group (if possible). When everyone is present, have the members compare their articles of nature to someone elses. Participants should tell how and why things are related & how they depend on one another for survival. Having done this, the leader may want to bring up the fact that a "biome" is composed of interrelated and interdependent living organisms such as the ones collected by participants.

The group is now open for questions and discussion.

Some questions are:
1) In what part of the marked off area did you find those?
2) How are they dependent on each other?
3) Do they depend on anything else?
4) Why did you pick those particular things?
5) What happens if you don't put them back where you found them?

If there are no further questions, the group leader should have the participants return their objects where they got them.

Pet Rock

Purpose? To discover individuality in similar objects.

Materials: none

Procedure: Ask each person to find a stone. Sitting cross-legged in a circle tell each person to feel his stone carefully without looking at it. Give them a minute or two to do this. Then ask everyone to pass his stone to you. After jumbling them up, cover each stone with your hand and pass it to your right. Tell everyone to try to identify his stone by its feel. Each time a person receives a stone he will feel it to see if it is his. When he thinks his stone has returned to him, he is to let it drop to the ground and continue passing any other stones that pass to him. Do not tell them in advance why they are feeling the stone and emphasize the importance of not looking at the stone.

Questions:
1. Did you dind your own pet rock?
2. What type of texture did it have?
3. Was this what helped you find it? If not, what did?

Bug's Eye View

Purpose: To help students relate better with animals.

Materials: none.

Procedure: Have everyone stretch out on the ground, eyes on grass level, to see what the world is like to a bug. A blade of grass is like a tree! A pebble is mountainous! Big things like trees aren't even seen.

Questions
1) How did you feel?
2) Would you like to be a bug? Why or why not?
3) Were you frightened?
4) What kind of things would you do as a bug?

Nature Collage

Purpose: To help exhibit the beauty of nature.

Materials: Cardboard cut in 12" x 16" pieces and glue.

Procedure: The students collect all sorts of common, interesting, outdoor objects--twigs, leaves, moss, grass, flowers, pebbles, sand, seeds, burrs, nuts, acorns, pine cones--the more, the better. Then each person takes a piece of cardboard and places his objects on it, trying to work out some arrangement that gives him pleasure. When he's satisfied with his arrangement, he glues each object into place. When the collage has dried completely, it will make an interesting hanging, framed or unframed.

Questions
1. Why did you choose these certain objects?
2. What king of design did you make? Why?

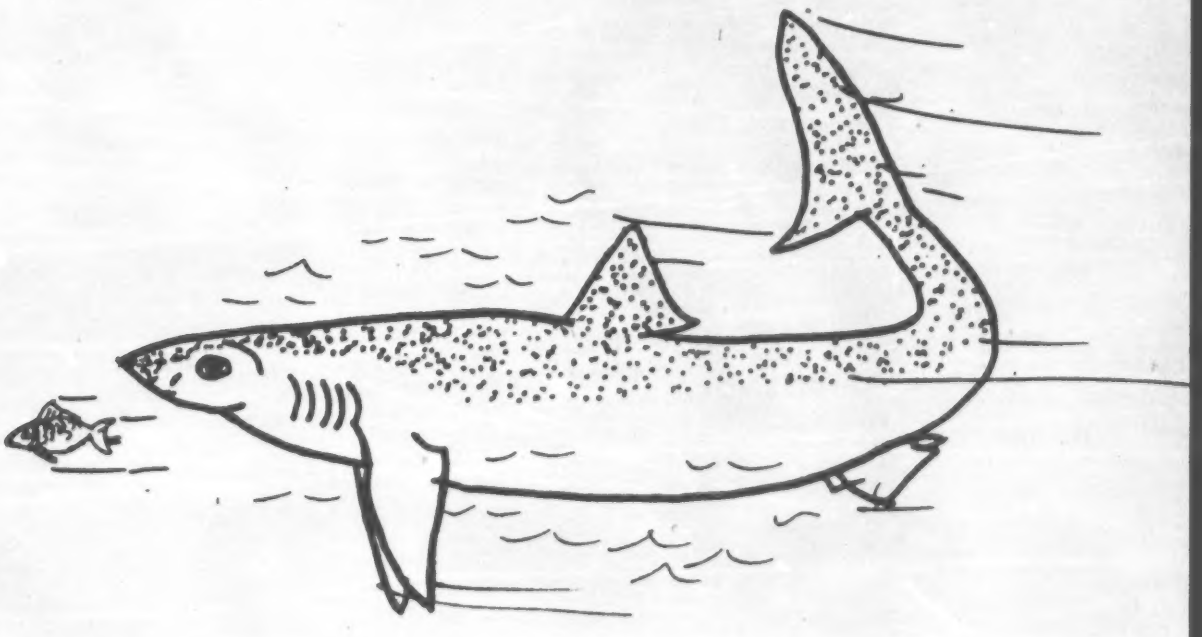
Survival of the Fittest

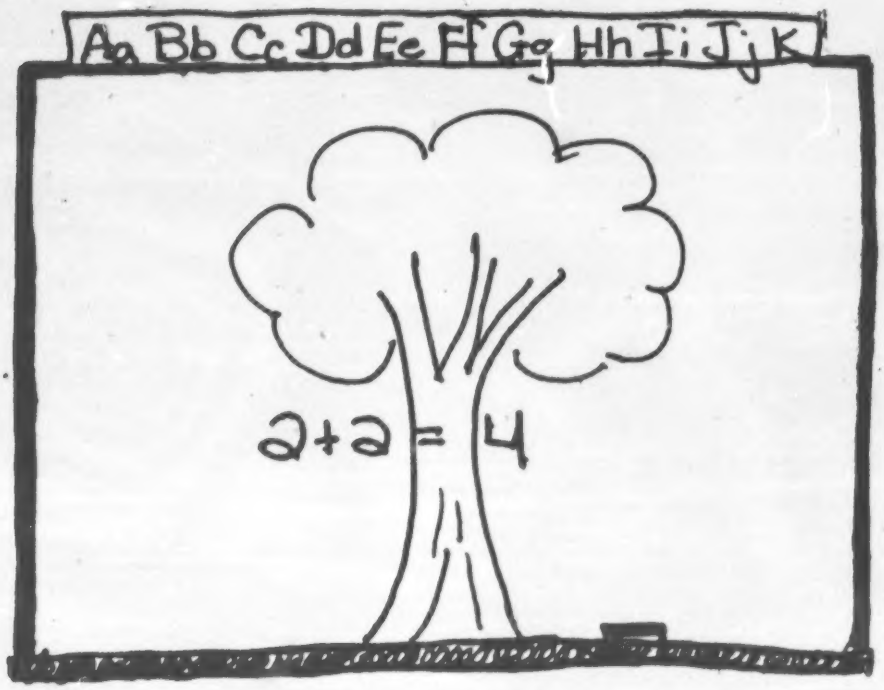
Purpose: To help the student cope with survival situations.

Materials: sling, rope, blindfolds.

Procedure: At least four students in a group. This activity is best done over a long period. Each student must be disabled in one way or another. (broken leg, blind, deaf, etc.) A situation must be provided such as a plane crash, shipwreck, etc. The students must learn to survive in the environment without any man-made materials. They must be able to (1) build a fire (2) make a temporary shelter (3) materials to protect themselves and (4) gather food (make sure they do not eat these things in case they are poisonous). They must remember that they are disabled and must all work together. After the three hours are up, gather everyone together in one group and hold a discussion.

Questions:
1. What were the problems you encountered?
2. How did you solve them?
3. In what ways was your survival threatened?





2. Classroom

Pinecone Pin

Purpose: To show one of the many different uses of nature.

Materials: pinecone, acorn, glue, pipe cleaners, spray lacquer, (optional) felt and safety pin.

Procedure: Glue five pinecone scales into the cup of an acorn. Glue a seed or bead into the center so that a pretty flower shape is formed. Add a bit of moss if you like. Attach a stem made of a green or brown pipe cleaner. Glue several pinecone scales to the stem for leaves. Spray or paint with lacquer. Or, omit the stem and glue a bit of felt to the underside of the acorn cup. Insert a small safety pin.

Questions:
1. Can you think of any major things that we use nature for?

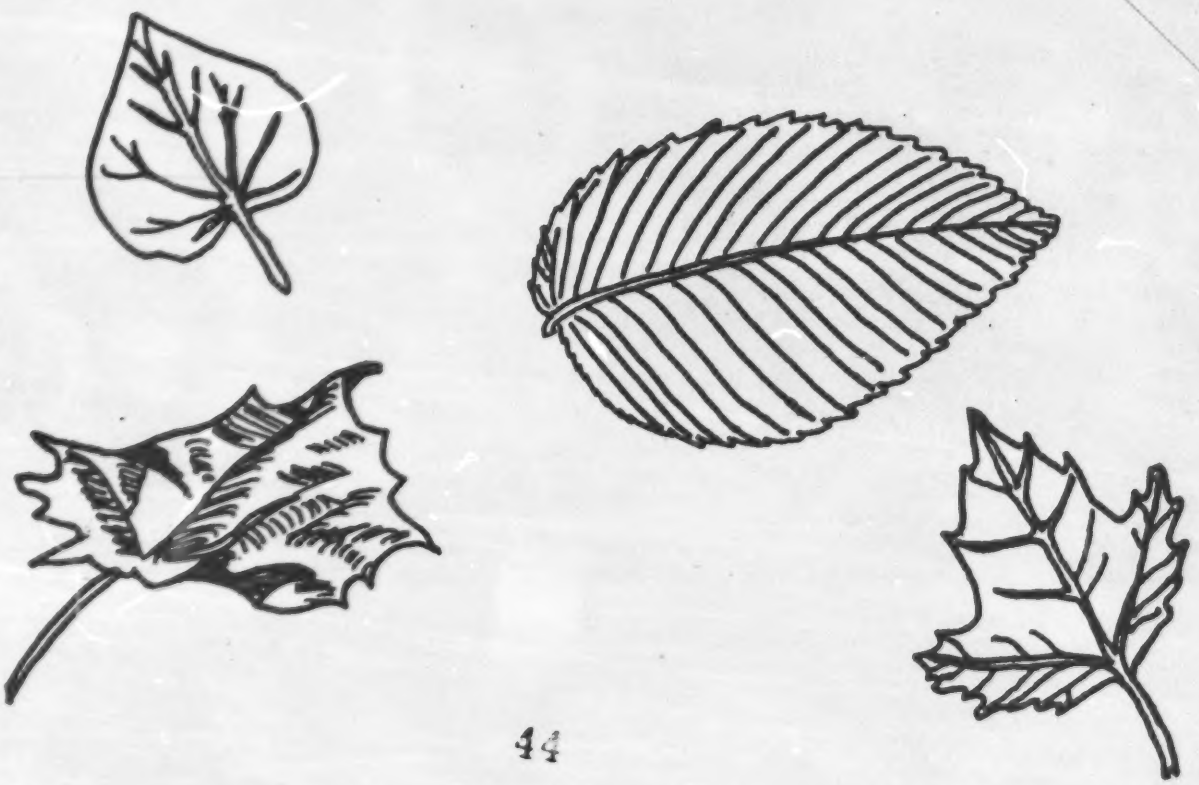
Leaf Rubbings

Purpose: To observe the different patterns in nature.

Materials: leaves, paper, crayons.

Procedure: One of the nicest ways to decorate notepaper, paper napkins, table mats, book covers or other articles made of paper. Very easy, too. Find and bring back leaves with different and interesting shapes. Have each student fold their paper in half or quarters. Place a leaf between one fold, vein side up. Then rub a crayon across the paper on top, going in one direction only. The outline of the leaf will appear. Then write the name of the tree from which the leaf came and you are finished.

Questions:
1. What kind of tree did your leaf come from?
2. What does your rubbing remind you of?



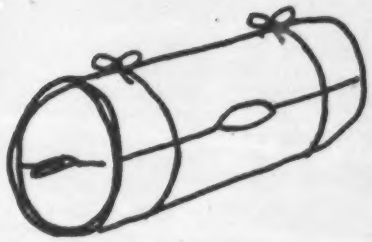
Twig Whistle

Purpose: To discover different ways of making sounds.

Materials: twig, knife (sharp), blade of grass, string.

Procedure: Find and cut a tree twig about three inches long and a half inch to an inch thick. Slice the twig in half lengthwise. Hollow out a small section of each half, about in the middle. Scopp out a small area for the mouth to blow into along one side of each half so that when the twig is put together again these areas will be joined. Place a blade of grass in the scooped-out area of one side. Put the other side back in place, and tie the two ends together with a bit of string, good and tight. Then bolw hard into the scooped-out section--and it will make a fine squawk.

Questions:
1. What type of sound do you get from this?
2. What causes this sound?
3. How does it produce the sound?



Feather Bird

Purpose: To teach the different types of feathers a bird has.

Materials: cardboard, feathers.

Procedure: A project that keeps going on for some time. The youngsters try to find and bring back any feather they can find, after any walk or trip. Draw the outline of a big bird on a piece of cardboard, cut it out, and place it against a door or wall. Every time a feather is found, that feather is glued to the bird, wing feathers to the wings, tail feathers to the tail, down to the throat, etc. In time, the bird will be completely feathered--and a very strange bird, indeed.

Questions:
1. Did you learn anything about the structure of a bird?
2. Did you ever realize that a bird had different kinds of feathers?

Smudge Prints

Purpose: To become aware of the many sizes of leaves.

Materials: leaf, square of soft cloth (cheesecloth is good), food coloring, ink or paint.

Procedure: Nice and messy! Select a well-shaped leaf, and lay it on a sheet of paper. Wrap the index finger with a small square of soft cloth, holding it on the finger with a rubber band. Dip the cloth covered finger into a few drops if food coloring, ink, or paint. Holding the leaf in place with the left hand, smudge color by stroking the cloth-covered finger across the edges of the leaf onto the paper until a complete outline has been made. Lift the leaf carefully--and a pretty leaf silhouette will show up. Use the paper for leaf identification, placemat, bookcover, or other decorative use.

Pinecone Pete

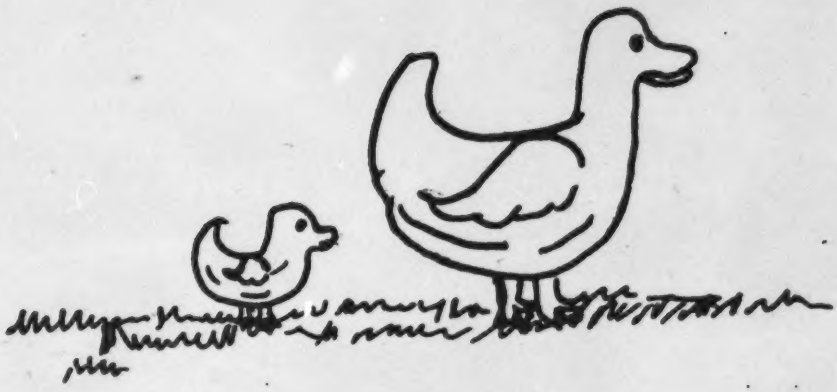
Purpose: To stimulate creative ability while emphasizing adaptive abilities of animals.

Materials: pipecleaners, pinecones, lima beans, acorn, felt.

Procedure: An open pinecone turned upside down makes his body. Attach a brown pipecleaner up near the top for his arms. Insert other pipecleaners near the bottom to form Pete's legs. His feet are large lima beans. A circle of felt with a small hole in the center and fitted over the acorn will make a floppy hat.

Questions:
1. Where could this animal live?
2. What structure does he have that would make him suited for his environment?
3. Guess what kind of food he eats.
4. How is he protected from his enemies?

3. Follow-up



Poetry

Purpose: To have an individual become aware of the beauty of Nature. (This should be used as a follow-up for paint-a-picture.)

Procedure: Have each student write a Haiku on the back of his picture that describes the drawing he has made.if this is used as a follow-up for "Paint-a-picture".

Poetry Forms

Group poetry can be done by letting each person write a line or two as part of one whole poem.

Haiku

Haiku is a three-line verse form which originated in thirteenth century Japan.

Characteristics of the Haiku

Three lines: Line 1 contains 5 syllables: Line 2 contains 7 syllables: Line 3 contains 5--17 in all.

***Each poem includes the season, location, reference to nature.
***The subject matter deals with simple ordinary things.
***Does not have to have a rhyme patterm.
***Few articles or pronouns--syllables can be used for better purpose.
***Thought comes first: then the syllables are adjusted to fit the form.

Haikus

Today is blooming,
Tommorrow is a new day,
Yesterday is gone.

Elegant nature;
It must escape from danger,
For man shall kill it.

The crystal blue lake,
Glimmering and glistening
So beautiful.

Where does the sky end?
Or does it even begin?
Who knows the answer?

"Word" Cinquain

1. _____

2. _____ _____

3. _____ _____ _____

4. _____ _____ _____ _____

5. _____

1. Use one word to name the subject you are writing about.
2. Use two words to describe #1.
3. Use three words about what #1 is doing.
4. Use four words to tell how you feel about #1.
5. Use a word that means the same as #1.

In the strict poetic sense, cinquain poetry has five lines with a certain number of syllables per line --

2
4
6
8
2

instead of a number of words. You might try to get fancy as you go on with poetry.

The Sound

The sounds of baby birds and the
sounds of nature blend in. But cars
and trucks do not blend in with
nature and it's wild animals.

By: Karen T.
5th grade

Our Environment

Our land is beautiful
We can enjoy it,
But if we litter
There will be no place to play
And nobody can swim
In muddy water
And nobody can go in the woods
To see squirrels play
And hear birds sing.

People ask "Why do they do it?"
And the answer is
They're too lazy to put it in the garbage.
When the people litter and you see
Them, tell them politely to put it in
The garbage.

By: Scott Privette
5th grade

Liza Jackson

Yesterday I went to Liza
Jackson
And questions I kept askin'.
We used our senses of touch
and smell
For we used them very well.
We made different stuff
It wasn't easy, it wasn't rough.
The things I made I thought
were pretty good.
I wish I could go again, I
wish I could
We learned many things
from our guide
About the environment
The guidance I had was
very nice
I did somethings once or
twice
Liza Jackson was very fun
I wish I could go again and
again.

By: Donald Holland
5th grade

Follow-up Activities

These exercises may be used in the classroom or after another activity.

BIOME-SOUNDS CROSSWORD

Purpose: To help the student to become more aware of the relationships between animals.

Materials: Paper, pencils.

Procedure: Have 1 large piece of paper either taped down or pinned up against something hard. Tell students or participants that they are going to make a crossword puzzle without clues.

Have one student print a word such as frogs on the paper. Then give another member a chance to make a word from frogs. For example, adding -nake to the s in frogs, comes out snake.

frogs
n
ant
k
bear

The leader may want to limit the words to a particular wildlife theme, such as sounds. (squeak, hoot, tweet, etc.) The bigger the puzzle, the better.

WILDLIFE IN HERALDRY

Purpose: To show the differences in plants and animals.

Materials: Paper, pencils or crayons.

Procedure: Pass out paper and pencils or crayons to participants. Instruct them to draw a coat of arms using their favorite plants or animals or both.

Some questions are:
1) How are the plants/animals you drew dependent or related?
2) Where are the plants/animals you drew found?
3) Do the plants/animals you drew have any special meaning to you? If so, what?

V. Evaluation

March 12, 1976

To the sponsors and students of S.T.E.P.:

I highly commend and support your program in its work to develop an understanding and appreciation of our natural environment.

All twenty-eight fifth grade students from Mary Esther Elementary became enthusiastically involved in the many experience learning activities at Liza Jackson Park which the students from Fort Walton Beach High School skillfully and creatively exposed them to.

The varying techniques of identifying with nature through the use of imagery and by using the senses, especially touch and sound, stimulated awareness of how man can survive in nature, how man pollutes nature and what can be done about it.

Student explanations and examples of the sea-life food cycle and the food web activity particularly interested the fifth graders and developed the concept that everything in nature depends on others.

I wish you continued support for your excellent program and look forward to sharing another stumulating and enriching experience next year with a new class of inquiring young minds.

Sincerely yours,

Mrs. Marie Turain
Teacher, 5th grade
Mary Esther Elementary School

Some Comments of Elementary Students

I thoroughly enjoyed your help in the activities we did. I also enjoyed the S.P.I.C.E. and our E.S.A. The E.S.A. helped me to look at nature in a more considerate way. Even though I got bitten by bugs, frostbitten every night, and completely muddy, I still enjoyed it just as much. If it wasn't for your help I probably wouldn't have enjoyed it as much.

Mark Burch
6th grade

I really appreciated you coming down and helping us. We would not have learned as much if you had not come. It was really fun learning about the environment around us. I wish I could have stayed longer so I could learn more. It was really nice of you to leave your work in school and come help us, than go make up your work. I also enjoyed the activities we did, they were really fun and educational.

Kaye Cain
6th grade

I enjoyed your club during my stay at Munson. I really learned alot, like types of textures, smells, sizes, and so on. Now that I've been taught these things I really appreciate my environment a whole lot more than I used to.

Amy McPheron
6th grade

Thank you very much for coming and making our learning interesting and fun. Ya'll did a great deal of work on all the things we did and I think it was just great! All the teenagers that came were very helpful, nice, and understanding, especially when we went looking for S.P.I.C.E. That was so fun and I think we never would have had as much fun as we did if you all weren't there, so thanks again.

Patti Sambogna
6th grade

Thank you very much for all the activities you showed us at Munson. I liked them all. I really liked the name game, the rock game, when we had to build the bird nest, when we made the weird creatures, just all of them. Thanks for taking the time to help us. I really learned alot. Good luck next year.

Tammy Fondren
6th grade

I had a lot of fun! I learned that if you sit in just one spot and look very hard you can find 5 times more insects than you would think there are. I learned about how many animals you can make up with using nature. I learned about the water cycle.

Cindy Hickman
6th grade

P.S. I enjoyed the S.T.E.P. students.

You taught me so much when you were at Munson that now I am more aware of nature. I hear, taste, smell more things than I ever did before. I have also been finding most of the things I've seen up at Munson down gere at Niceville like the stinging nettle.

I'm sure if you hadn't been there it would not have been any fun. Don't worry. I'm still catching Grandaddy Longlegs.

Kevin Blow
6th grade

I would like to thank you for making my trip to Munson more worthwhile. I really enjoyed how we learned to make things from nature and how we learned what a wonderful thing nature really is. Now I feel as it I could live in nature all my life and not have to depend on man-made things for myself. Taking participation in the S.T.E.P. activities helped me to be more aware of nature and it's beauty. Thanks for a fun time at Munson.

Linda Gorman
6th grade

Thanks for a very great educational experience. The trip brought all of us closer to our environment. I don't think I've ever enjoyed learning so much. I wish I could live there the rest of my life. Now I always look before I leap (step!) because I might be stepping on a living creature. Thanks again for a great time!

Jeff Crumpler
6th grade

P.S. Tell Mrs. Privette I got her doing what she does best. EATING!

I really appreciate your hard work and time for coming down here to teach us more about nature. I didn't consider you as teachers because I could just sit and talk about how I felt and you would do the same. You were more like the smarter students.

Nancy McBride
6th grade

I wouldd just like to say how much this experience has meant to me. I know how hard you worked toward this trip and I really appreciate it. You have showed me how beautiful nature is and that we should keep it that way. I truly wish that more people could experience what I have had the chance to. You have showed me many things about the environment and inspired me to join with 5 other people in starting our own special S.T.E.P. program at Wright Elementary. I truly want to thank you again for this experience!

Theresa T.
6th grade